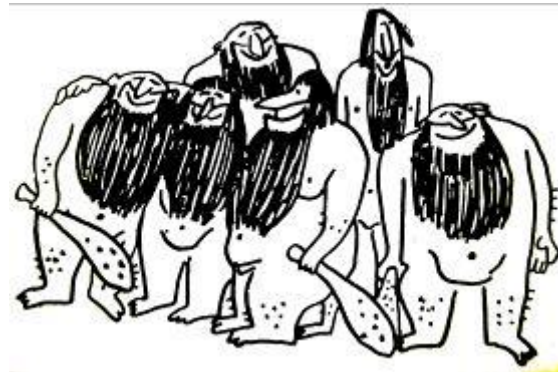


Rochester DX Association



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Deadline for Next Issue:

August 31, 2024

President's Letter

As we conclude another RDXA “year”, I’d like to thank those who continue to support and participate in the club. We continue to be active, embrace new technologies and persist in traditions that many like us started so many years ago.

The “season” isn’t over yet as probably our biggest undertaking each year is fast approaching – Field Day 2024.

The planning team has incorporated more ideas that will make the operating experience even better, a smaller footprint but with improved capabilities should once again place us in the top of the class.

We can always use operators no matter your experience. Sure, the club is out to “win” of course but not at the expense of the participation by it’s members. The competitive spirit is one the organization has held for many years and not just pertaining to FD.

The forefathers of the RDXA prided themselves with unparalleled operating expertise, in chasing DX, antenna construction, radio repair and experimentation. Many of those same attributes are still alive today. Look at recent conversations on our reflector, questions being asked and several immediate replies and suggestions. Great knowledge and the willingness to share.

Out of town members still contribute to the success of the club, a true testament to the RDXA as a whole.

I’ve been proud to serve as President (once again, second time around) for somewhere over the last 10 years or so. I’m looking forward to continuing on the Board of Directors for years to come but it may be time for a change at the top. That’s a decision for the Board of Directors but I would respectfully decline this time around.

I’ll be retiring in a few weeks and plan to spend way more time at W2CCC, a house we have in the Adirondacks that has taken 20 years of our lives to restore. Granted, a bit selfish as radio operation up there is a far

cry from a ¼ acre city lot. Last week alone, we had a substantial EU opening on 6m and I suspect, with my location and equipment, a far greater experience than may have been had here.

Good timing as at this point in the cycle, I should be able to take advantage of it.

Attended our 33rd Dayton (- 2 COVID years) a few weeks ago, the RDXA banner flew proudly over the “hospitality tent” that was started many years ago by N2BEG and other Rochester hams. We’ve continued the tradition, many know the spot and always stop by for a chat. Interesting how time marches on as unfortunately, some are no longer with us and others don’t come every year. In the past, we’d consume 4 cases of “807s” some years, this, we hardly drank one. Several bags of chips, pretzels and cookies were also taken back home.

We enjoyed seeing some of our Australian friends (who have not joined us for 9 years!) and many others that never seem to miss an opportunity to attend. Great dinner with our NFRS neighbors on Thursday nite and a communal dinner with WJ2O, KA9FOX and several others Friday. Saturday we discovered an outdoor mall just outside of Fairborn that had several different dining choices.

The Contest Super Suite was well attended each nite and many DX related conversations were had. Probably the first time ever for me, brought home absolutely nothing radio wise.

In closing, please mark your calendars for Tuesday 20 August as we’ll be holding our yearly IRVfest at the Del-Monte lodge, all are welcomed.

More information will be forthcoming but if you have attended before, much the same will happen this year as well.

A great way to conclude the 2023-24 season and begin the 2024-25 one.

Best DX es 73,

Chris, K2CS (W2CCC FN23)

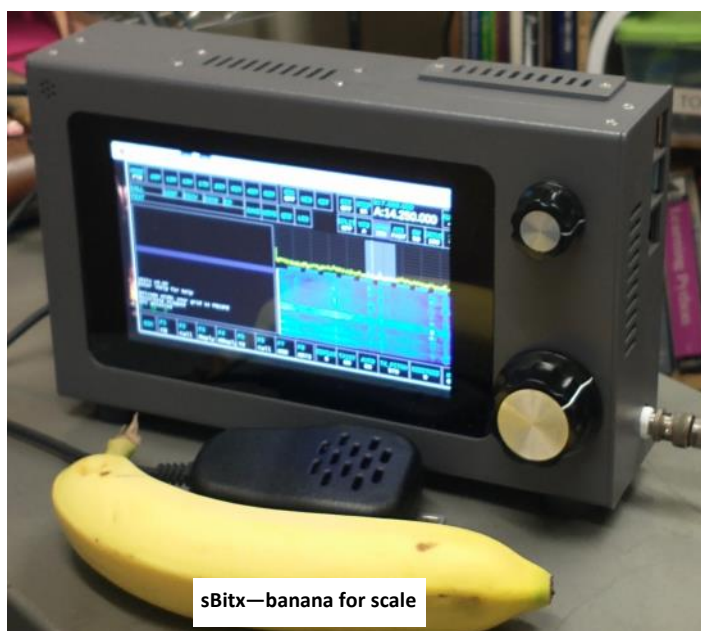
RDXA/RVHFG Awards Banquet—April 14, 2024



Wayne King, N2WK, receives the first-ever Rochester VHF Group Lifetime Membership Achievement Award, presented by Chairman Jarred Jackson, KF2MR.



Rus Healy, K2UA, received the RDXA's KE2WK Memorial Award and the RVHFG's W2UTH Memorial Award. L-R: Chris Shalvoy, K2CS, Rus Healy, K2UA, and Jarred Jackson, KF2MR



The sBitx Transciever—A First Look

John AC2RL

This HF Signals sBitx “near-QRP” transceiver was my major purchase at Hamvention this year. It is a 25 watt 80-10 meter rig that does SSB, CW, RTTY, PSK31, and FT8 in an enclosure the size of a cigar box. The user interface consists of a 7” color touchscreen and two knobs. It is a hybrid SDR rig, with an analog front end and mixer. The IF is digitized and everything downstream is digital. A Raspberry Pi model 4 provides the processing power. The Pi handles the SDR functions, the user interface, logging, macros, CW sending and decoding, and all digital modes. Receive bandwidth is variable from 50-5000 Hz. The span of the color spectrum and waterfall display can be varied from 2.5 to 25 KHz.

I bought the assembled rig at a show-special price of \$300. Their website offers assembled units, including shipping, for \$429 plus several kit options for less.

I’m still learning to use it but my impression is positive. I’ve made several SSB and FT8 contacts without any problems. The largely touchscreen-based user interface packs a lot of functionality into a small package. Clicking a button, say “BW” (bandwidth), enables the smaller knob to be used to change the RX bandwidth. It’s easy to forget what that knob is connected to and change the bandwidth when you wanted to change the volume.

The receiver seems sensitive enough. I wish it had a noise reduction function, but that’s the joy of a software-based product, it can be added in later releases of the sBitx app. The

app is open source and available on Github so there is also opportunity for developers outside of HF Signals to fork their own versions with different functionality.

While nominally 25 watts, the transmitter power varies by band. At 13.8 VDC, mine idles at 0.6 A. On 80 meters, it produces 43 watts, drawing 5.5A. On 10 meters it makes only 11 watts using 3.7 A.

The rig came with a little plastic bag containing a spare pair of output transistors. I have mixed feelings about that. On one hand it means they’re being proactive in case of potential failures. On the other, maybe it means that the transistors are blowing more often than they care for. In any case, I’m going to be sure to tune my antenna at reduced power.

Software development at HF Signals is ongoing. My rig has the latest software, version 3. Updating is easy with the rig connected to my home network either by Ethernet or WiFi.

Remote operation is simple. The sBitx can be controlled by any computer, tablet, or phone with a web browser by browsing to the IP address of the sBitx and entering a passcode.

HF Signals is the company of Ashar Farhan, VU2ESE, whom I met at Hamvention. He has designed a number of different successful Bitx QRP rigs such as the BITx20 and uBitx before the sBitx. They’re produced by a collective of workers in India. The company has a U.S. presence in suburban Chicago.

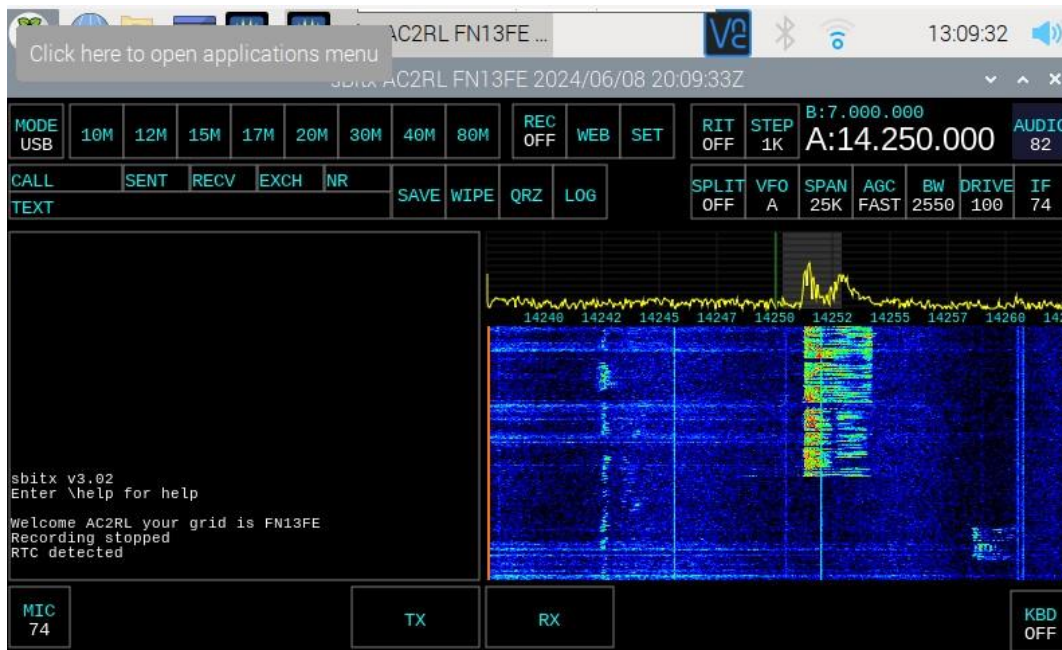
I’m looking forward to taking my sBitx into the field this summer to try some POTA activations. I’m interested to see how visible it’s display is on a sunny day.



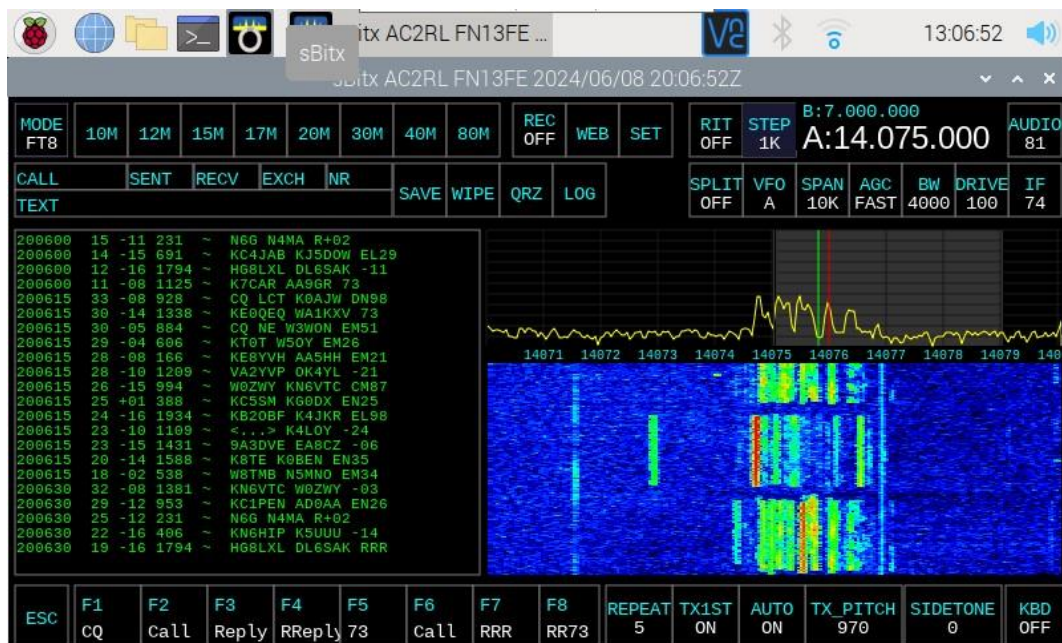
Left side detail. Note built-in microphone opening to the top left of the touchscreen



Right side: BNC output connector and USB and Ethernet ports of the Raspberry Pi



sBitx v3 SSB user interface. Spectrum width is set to 25 KHz. An on-screen keyboard (button at bottom right) can be used to enter logging information then use the SAVE button to enter it in the log. Alternately, an external USB keyboard and mouse can be plugged into the USB ports.



sBitx v3 FT8 user interface. Note green decodes in lefthand pane and macro buttons on the left side of the bottom row. Folks who prefer the original WSJT-X software can install the WSJT-X app on the Pi and it will see the sBitx app as a “Hamnet Net rigctl” type radio.

AM thru 40m Receive Antenna – Builder's Notes

Raj Dewan, N2RD

On our RDXA website you will find a video of the presentation I make in May 2024 on Multiband Receive Antennas for the low band. In this article I will provide some quick highlights and a builder's note with links for more details.

Quick recap:

- Receive antennas are especially useful on the low bands because of the high band noise
- The YCCC receive antenna array is easy to build as it consists of an array of 20' whips mounted on a short ground rod. No radials are needed.
- The simplest configuration gives you two directions with just 3 elements, sixty feet apart (total distance between elements is 120'). You could go shorter if you have less space.
- The full configuration uses 9 elements, with 8 elements on the circle and one element in the center. The phasing box uses three at a time to get 8 directions.
- It works really well, with about 12 dB of directivity (better than a 600' beverage)

Here are some links to useful resources on the web:

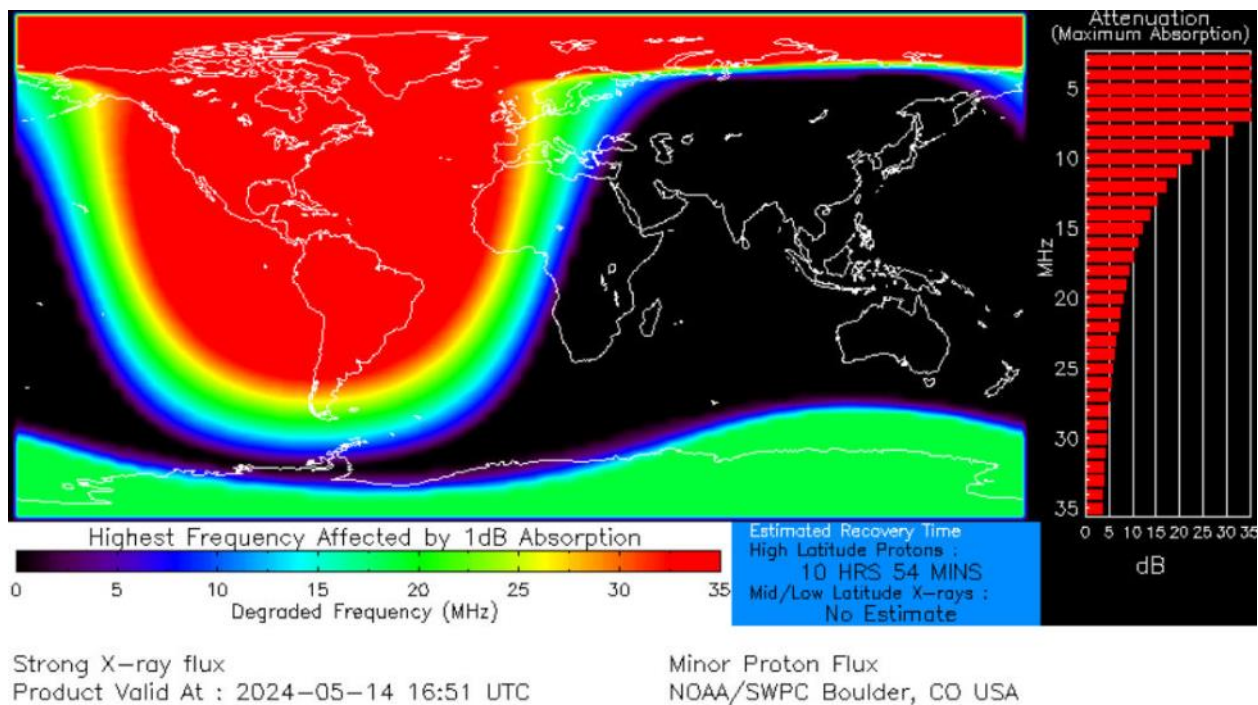
- *YCCC low band receiving array kit*: [User's manual](#)
- The articles in the *NCJ* sep/oct 2011 [part 1](#) and in the *NCJ* nov/dec 2011 [part 2](#) by John Kaufmann, W1FV.
- [PC boards](#) from PI4CC. I built the version modified by VE6WZ as it has on board common mode isolators.
- I bought all the electronics parts at Mouser. A BOM with Mouser part numbers is also available at our website.
- I bought the [boxes for the feed amplifiers](#) from Amazon for \$2 a piece.

I highly recommend this receiving antenna. It has been a game changer for me on 160m and 80m.

What Did The Sun do?

Doug N2BEG

We all heard about or even witnessed the intense aurora display that started Friday evening May 10th. As most hams know, anything the sun does usually has an effect on what we do, so paying attention to the sun is usually a good idea. (Its generally a good idea in general, lol) We generally think of increased solar activity as a good thing for radio, especially HF, however solar activity includes many things, some of which can and do affect our ability to use our HF radios as we normally do. These solar phenomena can include increased sunspot numbers (and corresponding increase in Solar flux, or SFI'), solar flares, CMEs, X class flares, geomagnetic storms, etc. All of which affect our ability to use radio waves on certain frequencies when they occur. NOAA has a solar weather website that tracks all this data and gives forecasts of all of the solar indices which affect us here on earth. When increased activity happens and flares occur in the x class regime, the resultant wave of radiation hurled at the earth causes the upper layers of the atmosphere to be affected so that they absorb radio waves rather than reflect them, hence the blackout as noted below.



After the multiple CME impacts of the week after the 10th, the above referenced HF blackout occurred over north and south America. Usually, these last for less than an hour or so, however sometimes the effects tend to linger, even more so when the events are pronounced as with large flares or multiple events like those that occurred the weekend of 10th. Scientists are now realizing the solar storms that occurred that weekend and are continuing to erupt are among the strongest in the last 400 years. The global effects of these are still being felt almost 2 weeks later as smaller flares and CMEs continue to be hurled from the surface of the sun. You may have heard that islanders in New Caledonia at -26 latitude saw the northern lights as did folks in Puerto Rico at -27. This makes this event special. As we head into the next solar month, the areas on the sun which caused this activity have now traversed the back side of the sun and are now facing earth once again. There have been alerts for aurora issued once again due to this.

According to Spaceweather.com, usual solar activity around this time in the solar cycle can indicate at least some CMEs

generated daily indicating the peak of the current cycle. We have been experiencing multiple episodes of 3-5 CMEs in **only hours**. It would seem we are in for a hell of a peak next June when it should be at maximum. What does that mean for the HF enthusiasts among us? Well, scientists and websites are well and good at predicting what frequency is good at what time, however when the sun gets rolling good like it is now, the models and predictions can go out the window in a hurry. Things change so fast it's hard to keep up. Of course, the best device to know what's going on is your own ears. Checking the DX cluster and RBN for local activity is usually pretty good, but not certain. You may have noticed lately that the HF bands have been fairly crappy lately until later in the day or evening. On the plus side is these storms energize or enhance other layers in the atmosphere and change the reflectivity at increased frequencies causing enhancement on VHF and UHF frequencies which we hams also notice. This naturally occurs each summer, however as the solar cycle heads towards peak, the enhancement on these bands is dramatically increased, such as we have seen since the storms started. 6m and above have been enjoyed major openings and continue to do so.

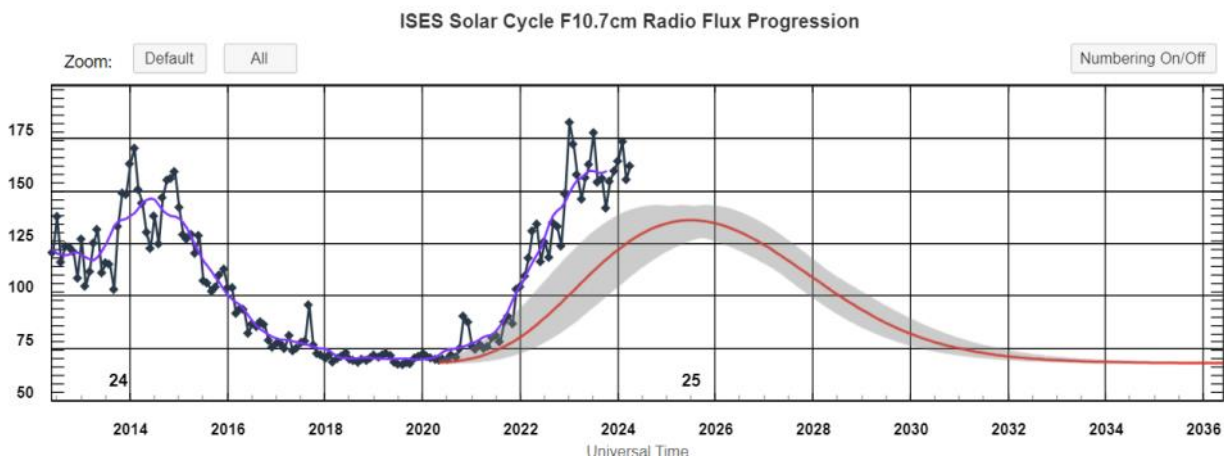
The study of space weather is a vast and complex subject with many factors affecting different things here on earth. This article only broaches the subject. The web is full of sites dedicated to monitoring the sun and its activities. Here are a few links.

<https://www.swpc.noaa.gov/>

<https://spaceweather.com/>

<https://solar.w5mmw.net/>

https://www.solarham.com/geo_forecast.htm



This graph shows the 10.7 cm radio flux which is one indicator of the intensity of solar activity. It's monitored daily by many sites.

The bottom line is we should always keep an eye on the sun. It will be very interesting to watch things over the next year or so as this solar cycle may be one for the record books. As with the Carrington event that caused wide spread havoc on telegraph systems in 1859, we may witness something extraordinary if this cycle comes even close to the intensity of the solar activity that was responsible for that.

Get on the air at any frequency you can and enjoy it while it lasts!

Ham IV Rotor For Sale

Removed from roof 11/23 (replaced with new rotor). This is an older rotor, it was converted from a Ham II to a Ham IV in 1982 (doing the math – it's at least 42 years old), but I've had no issues with it. Ed Gable did some testing last fall and noted that the brake sometimes did NOT re-engage when the brake was released. Brake appears to release OK and will re-engage (sluggish). He suggested a rebuild and re-lube. Rated for 15 sq. ft. of windload. Asking \$125 as is. Can text a video of it working.

Dave, N2CK 585-260-7854



Spiderbeam Assembly Rehearsal

AC2RL, KM2B, K2MTH, N2BEG, W3OAB, K2GC, N3HEN, and W2OLI got together at N2BEG's QTH on May 25th to see if we could remember how the Spiderbeam went together. Comedy occurred. We eventually figured it out and Mike K2GC volunteered to take it home and enhance it with dedicated spools for storing the wire and elements, and adding colored tape and other markings to make sure it will go together quickly on Field Day. A good time was had by all.



REMEMBER—Past issues of the RDXA Newsletter can be found on the RDXA website <https://www.rdxa.com> and the Digital Library of Amateur Radio and Communications (DLARC) at <https://archive.org/details/dlarc>

A Cool Accessory for The Ham Shack

Dave Hallidy K2DH

Many of you know that my wife and I spend our winters in South Florida. I've gotten to know a great group of hams there and we meet for lunch every Tuesday, shooting the breeze, discussing the latest DX, and talking about things we've done with our stations.

One thing that came up in the lunch group this winter was a little device called HamClock. Most of you are familiar with the GeoChron, which is very nice but very expensive (certainly more than I want to pay for a glorified clock!). Well, there's a low-cost alternative. The Hamclock. This is a little computer (a Quadra- like a Raspberry Pi in size and performance) that is especially set up to do the things the GeoChron does- display a world map in various formats, showing time and propagation, as well as many other things. See Figure 1 for mine, the way I currently have it set up. There are many different things to display on the screen, including (as shown) the MUF, Aurora, the Greyline, your spots (both by you and of you), as well as many different subscreens of the Sun and solar information.

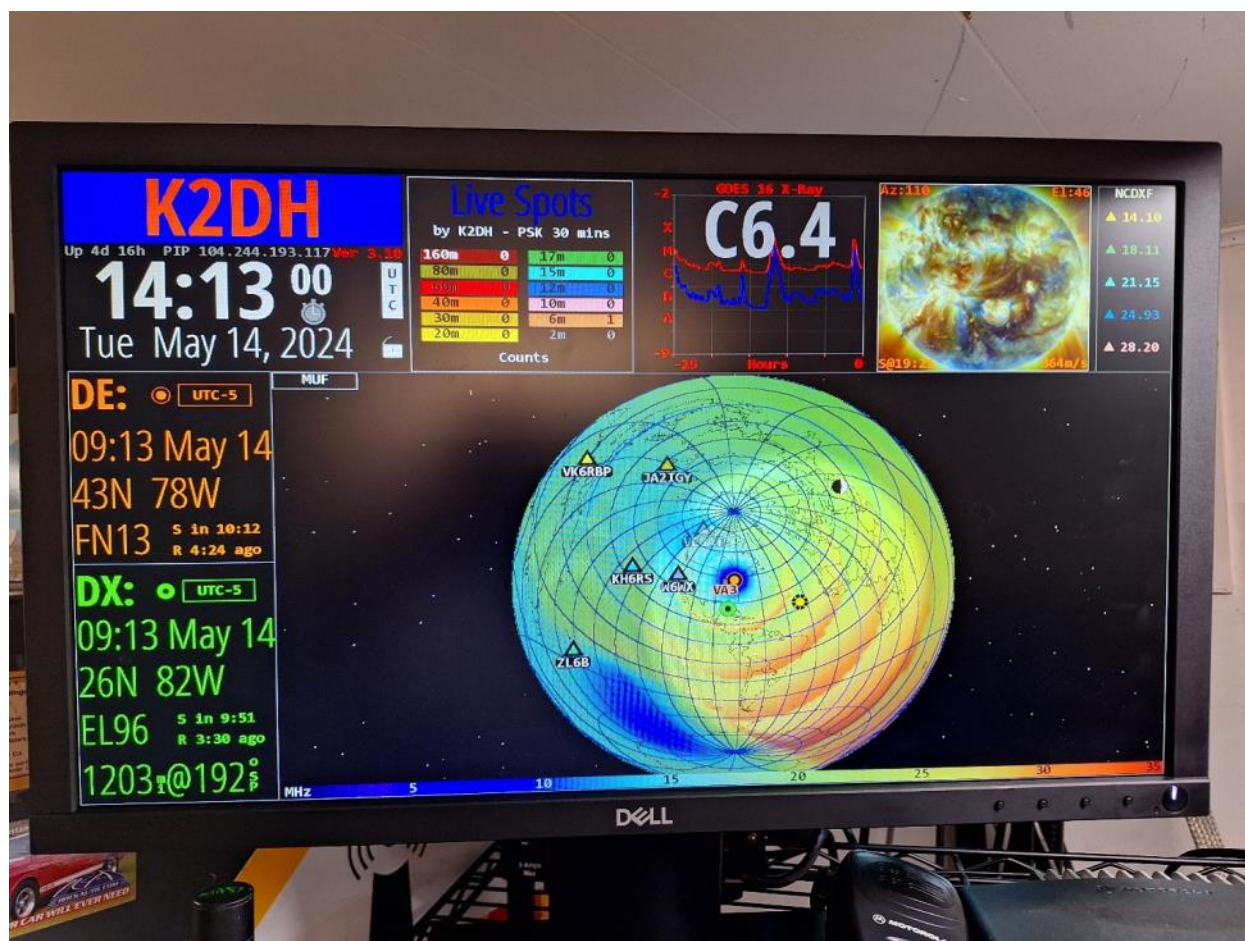


Figure 1



Figure 2

Figure 2 shows the device. It costs \$49(!), plus a few more bucks for a mini keyboard and it's shipped free. It comes with a stand, a power supply, a fan, an HDMI cable, and a 4 port USB hub. Built in is an HDMI video port, ethernet as well as wifi, and 2 USB ports. The box is 4" square and about 1" thick.

I'm using it with a 20" video monitor. The colors are changeable to your liking.

One really important thing I'm happy about is that I haven't noticed any frequency where the device or its power supply are generating RFI.

I believe everyone I know who has bought one of these is really pleased with it. You can find it at: www.inovato.com, where you can place your order for one. Be advised, they offer them every day, but usually by noon on a given day, they are sold out till the next morning. To me, this is a really nice addition to my shack and I believe a useful too, as well.

73

Dave K2DH

RDXA 2023-24 Calendar

September 2023

TBA — BOD
 9-11 — ~~ARRL September VHF~~
 19 — Meeting — Show Us Your Shack
 23-24 — ~~CQWW RTTY~~

October 2023

3 — BOD
 17 — Meeting — NYQP
 21-22 — ~~NYQP~~
 28-29 — ~~CQWW SSB~~

November 2023

4-5 — ~~ARRL SS CW~~
 7 — BOD
 14 — Meeting — AWA w/ RVHFG
 18-19 — ~~ARRL SS SSB~~
 25-26 — ~~CQWW CW~~
 30 — ~~BULLETIN DEADLINE~~

December 2023

1-3 — ~~ARRL 160m CW~~
 5 — BOD
 9-10 — ~~ARRL 10m~~
 19 — RDXA Holiday Dinner
 23-24 — ~~Stew Perry 160m CW~~

January 2024

2 — BOD
 6-7 — ~~ARRL RTTY Roundup~~
 16 — Meeting — FD Planning
 20-22 — ~~ARRL January VHF~~
 26-28 — ~~CQWW 160m CW~~

February 2024

6 — BOD
 10-11 — ~~CQWW WPX RTTY~~
 17-18 — ~~ARRL DX CW~~
 20 — Meeting — N2ZN, K2UA — NYQP
 23-25 — ~~CQWW 160m SSB~~
 29 — ~~BULLETIN DEADLINE~~

March 2024

2-3 — ~~ARRL DX SSB~~
 5 — BOD
 19 — Meeting — WB2WGH — Node Red
 30-31 — ~~CQWW WPX SSB~~

April 2024

2 — BOD
 14 — RDXA/RVHFG Banquet
 16 — Meeting — KM2B Antenna

May 2024

7 — BOD
 17-19 — Dayton Hamvention
 21 — Meeting — N2RD — Receive Antennas
 25-26 — ~~CQWW WPX CW~~
 31 — ~~BULLETIN DEADLINE~~

June 2024

4 — BOD—FD Meeting
 8-10 — ~~ARRL June VHF~~
 18 — Meeting - FD — Zoom only
 22-23 — ~~ARRL Field Day~~

July 2024

8-9 — IARU
 20-21 — CQWW VHF

August 2024

20 — IRVfest
 24 — ROC City Hamfest
 31 — Contest season concludes
 Membership year concludes
 31 — ~~BULLETIN DEADLINE~~



Rochester DX Association

Club Station — W2RDX

Club Website — <http://www.rdxa.com>

Facebook group —RDXA QTH

This bulletin is the official publication of the Rochester DX Association and is published quarterly.

All those with an interest in amateur radio, DXing and contesting are cordially invited to any meeting and to join RDXA.

Meetings are held at 19:00 Local time on the 3rd Tuesday of each month, September through June. Meetings are located at Johnny's Irish Pub located at 1382 Culver Rd. Rochester, NY. Consult the club website for up to date info.

President Chris Shalvoy – K2CS
president@rdxa.com

Vice-President Mark Hazel — K2MTH
vicepresident@rdxa.com

Treasurer Mike Sanchez –KM2B
treasurer@rdxa.com

Secretary Bill Rogers – K2TER
secretary@rdxa.com

Please send all newsletter submissions, comments, and complaints to the editor:



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Bill Rogers-K2TER
Mike Sanchez – KM2B
Lynn Bisha – W2BSN
Dave Hallidy - K2DH
Doug Stewart-N2BEG
John Hall—AC2RL
Rus Healy — K2UA

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Membership Dues can be sent via:

Paypal: treasurer@rdxa.com
US Mail: Mike Sanchez KM2B
8 Piccadilly Square
Rochester, NY 14625

Regular Membership: \$25.00

Family, Full time Student
or Out of State member: \$10.00

